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S. W. Chasnut & J. H.

An Essay

on

Hæmoptysis

Presented to the Medical Faculty

of

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for

The degree of Doctor of Medicine

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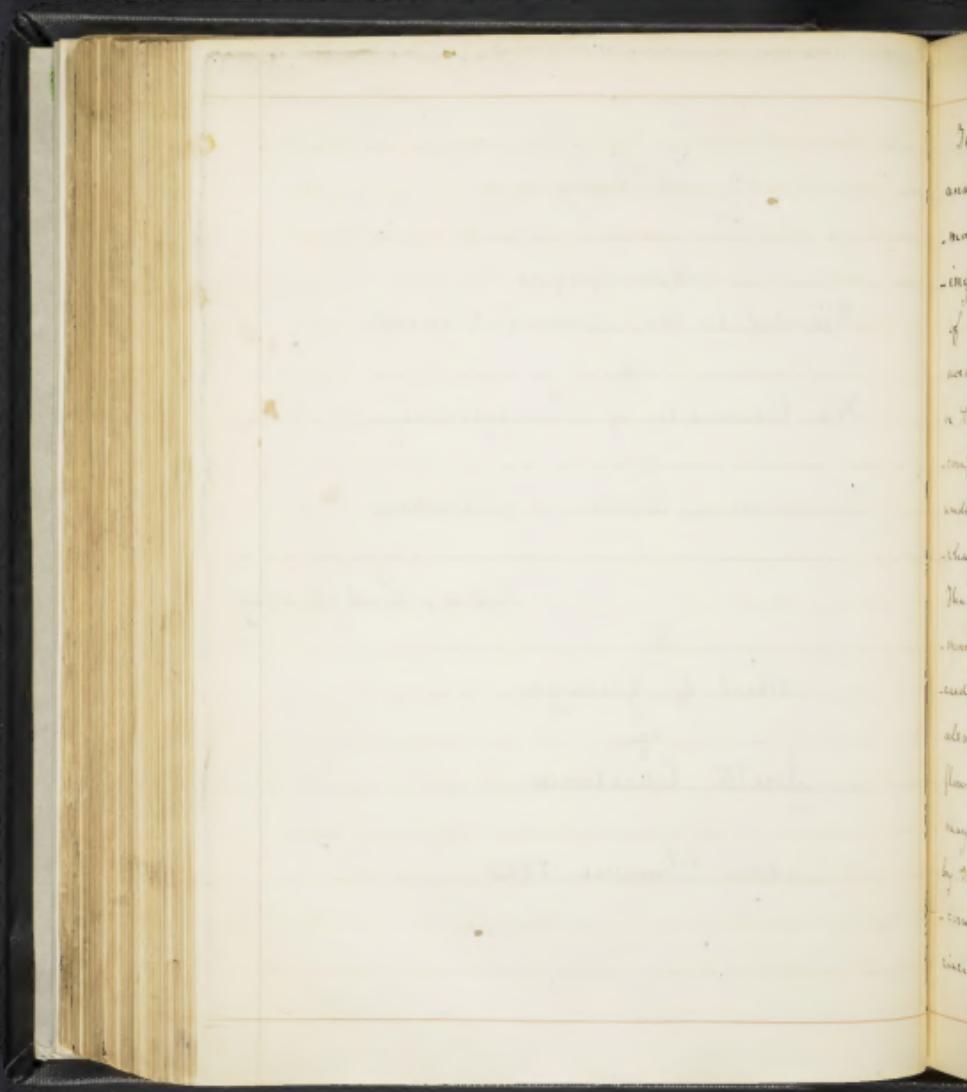
By

Albert. G. Goodwyn

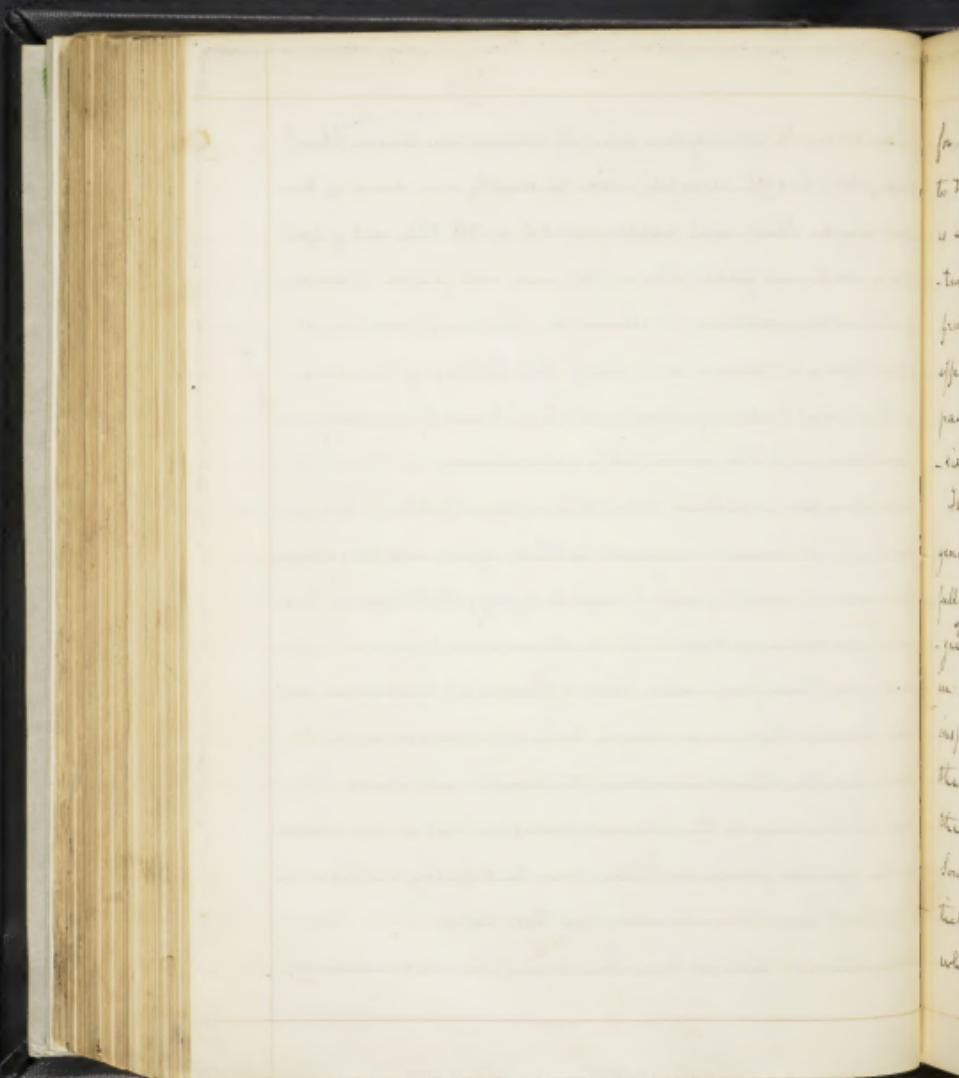
of

South Carolina

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The term Haemoptysis, from its derivation αἷμα blood  
and πνεύμα to spit, would seem to imply any kind of haemorrhage  
that was unaccompanied with the act of spitting; and, in fact, this is the true and proper meaning  
of the word according to its origin, but in its most usual  
acceptation, it means only to imply that bleeding of the lungs  
or their immediate appendages which is known to be always ac-  
companied with this unavoidable circumstance, and from this  
undeviating and necessary attendant or characteristic of haemor-  
rhage of the lungs, it is referred to these organs and these alone.  
The reason no doubt why it is used to signify this kind of haem-  
orrhage alone, is because it usually and most frequently pro-  
ceeds from these parts when blood is thrown out by spitting, and  
also because there is no danger to be apprehended when it  
flows from the internal surface of the mouth and fauces. It  
may also be owing to the seldom application that is ever made  
by the affected person, as there is no bad feeling or other con-  
sistant symptom attending in these cases. From these  
circumstances then, it may be easily perceived on account



for why it is this term is always and so invariably applied to this kind of haemorrhage. In fact there is no necessity at all in a matter of no practical importance, as to a further extension of the term, for when there is a discharge of blood from the mouth itself, or from the fauces, its symptoms & effects are so slight and mild as hardly ever to give pain to the affected person or to require any medical assistance.

The discharge of blood in haemorrhage of the lungs is generally preceded & accompanied with a sense of weight, fullness, and anxiety about the chest, a greater or less degree of pain in some part of the thorax and also some uneasiness in breathing, being increased especially on taking a full inspiration and sometimes a sense of heat is felt under the sternum and also a saltish taste is experienced by the patient before the disease makes its appearance. Sometimes it is preceded by more or less irritation or tickling sensation in the larynx, in order to relieve which a hawking or cough is made which brings



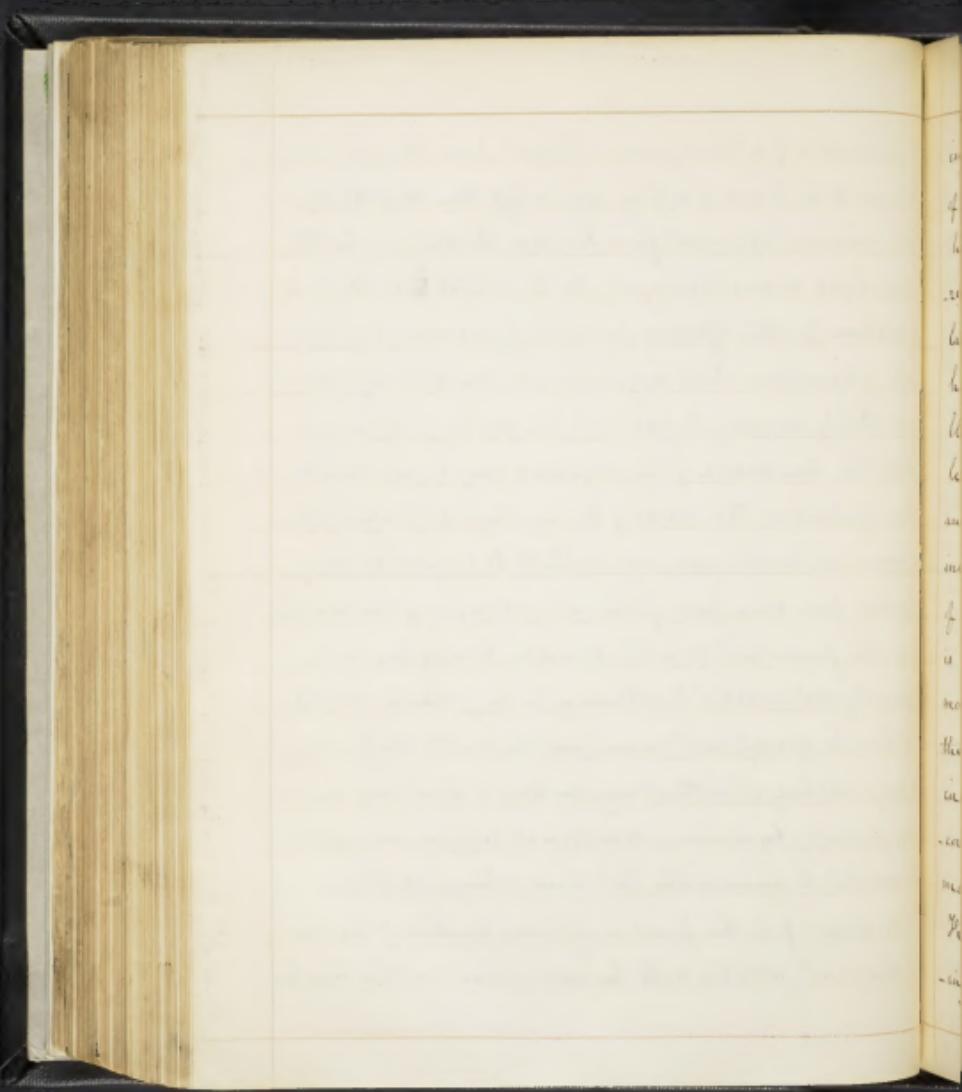
up blood of a florid color and putty appearance showing itself in streaks entangled with the saliva.

In a short time afterwards, the irritation returns & more blood of the same description is brought up and frequently accompanied with a rattling noise in the trachea. This is most commonly the manner in which

Haemoptysis shows itself, but occasionally at the very onset, the disease is accompanied with a cough and the blood is discharged by hawking. The blood which is thrown off from the lungs in the first instance is for the most part in very small quantities and then ceases to flow entirely - In other cases its discharge is much greater more particularly when it frequently occurs and often it thus continues to show itself at intervals for some time but however is rarely ever so profuse as to endanger life by its excess or suddenly impeding respiration. It will perhaps be proper to remark before I proceed to the further consideration of the subject that the blood which is spit up is not always of a florid color

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but sometimes of a thick dark or blackish hue. The inference however to be drawn is nothing more or less than that the blood has remained stagnant for a longer or shorter time in the chest before it was discharged. As this disease is liable to be mistaken for other affections particularly on account of the fewness of symptoms which may supervene it will be important and highly necessary to point out the marks of difference, that the true nature of the complaint may be ascertained. The affections or other kinds of haemorrhage with which this disease can or is in any way liable to be confounded are bleeding from some part of the internal surface of the mouth, from the fauces, and from the stomach. It may however be generally distinguished by attending to the following marks. If blood be spit out and pieces from the mouth itself, it is always discharged without any coughing or hawking and very frequently by viewing its internal surface, one will be enabled to perceive the spot from whence it flows. If it pieces from the fauces or adjoining canities of the nose it may and probably will be accompanied with a haw-

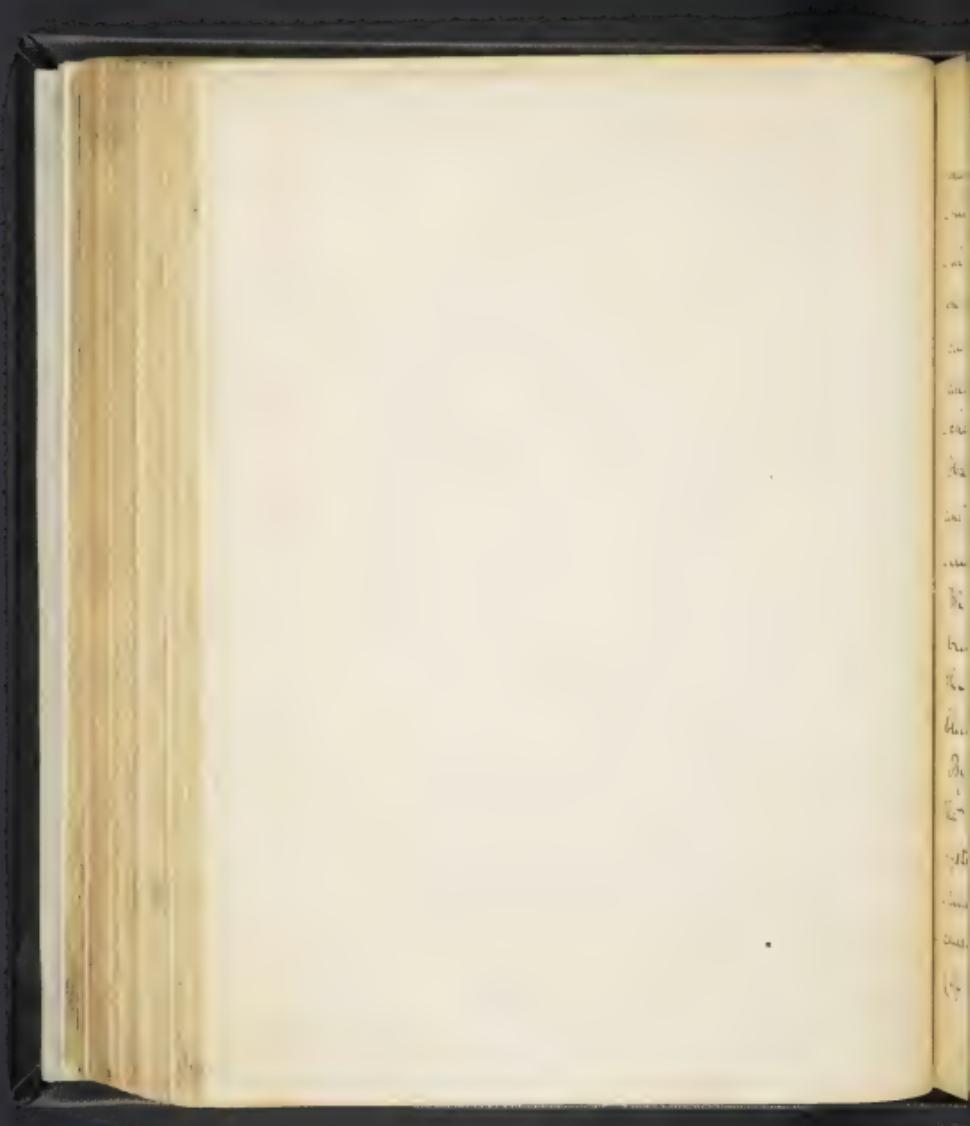


ing and sometimes coughing, but every one will be aware of its origin when he takes into consideration that haemorrhage from the lungs is of more frequent occurrence than that of the fauces, and moreover that the latter hardly ever happens to any but those persons who have been before subject to bleeding of the nose. The blood proceeding from the fauces has been said never to be of so florid or red a color, as that proceeding directly and immediately from the lungs. Sometimes by inspection into the fauces it can be evidently traced to the cause primitive. In general the manner in which the blood is discharged from the lungs or the symptoms which may more or less accompany this hemorrhage, will point out the place of its origin, but besides these there are other circumstances which may occur that will lead to a discovery of it, as the period of life and perhaps some other marks of predisposition.

From what has now been elicited as to the distinguishing signs, the disease may be easily known from a



bleeding of the mouth or fauces. It now remains to point out  
the manner by which it is to be distinguished from Haematemesis  
or vomiting of blood, as it is likely to be confounded with  
this also. It will however be easy to understand the marks  
of difference when we reflect that the blood which issues from  
the lungs appears for the most part in much smaller quanti-  
ties than when it proceeds from the stomach - That when  
it comes from the stomach it is always of a dark & blackish  
color, more glutinous, and frequently mingled with its contents  
on the other hand when it originates from the lungs, it is  
always or at least generally of a fluid or watery color and  
is intermixed with a small quantity of mucus or saliva.  
The reason no doubt why we are liable to confound the two  
diseases, is, because coughing and vomiting sometimes occur  
nearly simultaneously, but according as the one or the other  
first arises, we may be enabled to ascertain the source  
from whence it proceeds, whether from the lungs or the stomach.  
The causes which are capable of inducing this disease  
are numerous and should be considered under the heads  
of occasional and prevalent. Among the occasional,



may be enumerated any of the following, as jumping, running, violent attempts in lifting heavy weights, powerful exertions of the voice, a constant practice of blowing on wind instruments, drinking to excess, exposure to the sudden vicissitudes of weather, the amputation of a limb, and the suppression of some natural or accustomed discharge, as the menstrual or hemorrhoidal flux.

Haimoptysis may likewise occur with pneumonia, cough and hectic fever, but on these occasions, is to be considered as a critical discharge.

We may rank among the occasional causes whatever brings on a peculiar degree of excitement in the system and thereby hastens the circulation of the blood through the lungs.

By predisposing causes, we mean nothing more or less than that natural diathermia which sometimes prevails in the system and which readily manifests itself on the patient exposing himself to the occasional or exciting causes. By attending particularly to this diathermia. (If any such exist) our treatment becomes the more

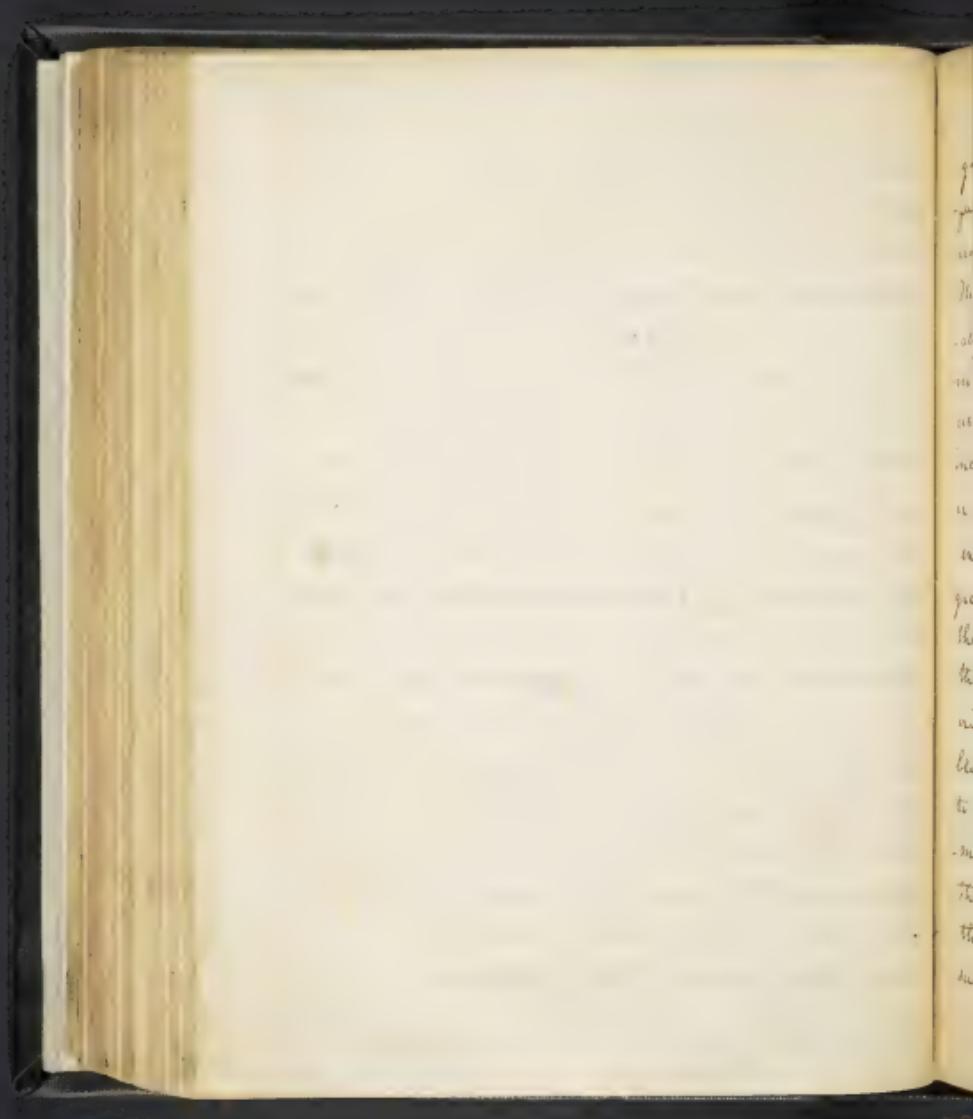
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rational and we are better able to form a correct opinion of the probable termination of the disease.

What are the predisposing causes? 1<sup>o</sup> Plethora or general fullness of the blood vessels which is the least frequent cause and is more under our control, than any other for here there exists no original or permanent derangement in the organization of the parts. 2<sup>o</sup> The period of life. Haemoptysis is said to prevail chiefly between the age of fifteen and twenty five; seldom happens to persons under twelve years and is by no means common after thirty five. Its occurrence at this season of existence has been imputed to the growth of the thorax, after other parts of the body have acquired their full extent and resistance which is manifested by the increased width which the chest acquires at that period of life. 3<sup>o</sup> Scrupula or that habit of body which among other peculiarities is denoted by a general delicacy of structure throughout the whole body; as a thin soft and smooth skin, light colours or bluish hair, and a lean muscular fibre. If this delicacy



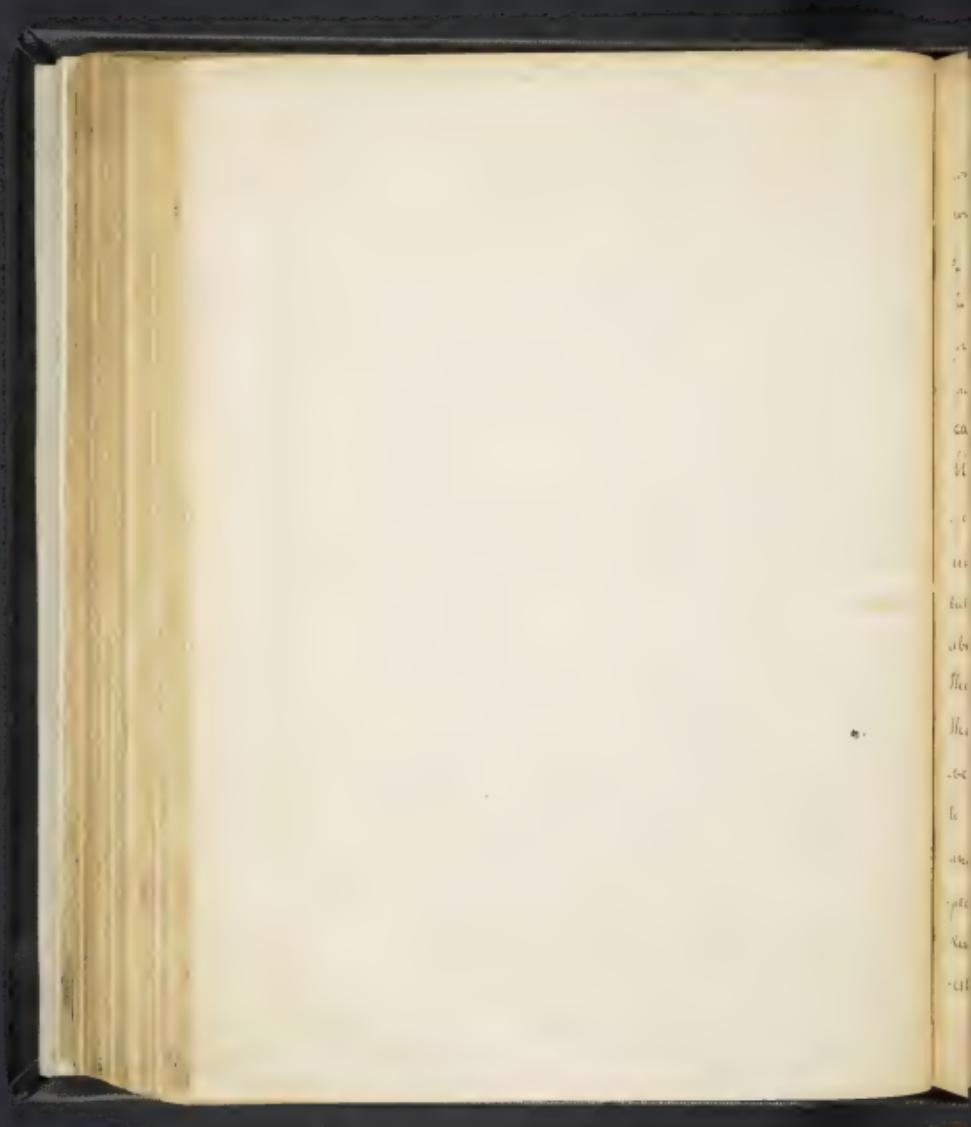
of structure the blood vessels appear to partake and cause  
- - - - - frequently a disposition to haemorrhage becomes also a  
character of scrofula." The fourth we<sup>t</sup> last predispo-  
- - - - - sine cause is malformation of the chest, which appears  
to act in establishing this disease by preventing the neces-  
- - - - - sary expansion of the lungs. The body in this instance  
is marked by a narrow thorax and prominent shoulders.  
Persons of this description of body have been most com-  
monly affected in their earlier life with the rickets,  
which causes the ribs or spine to be more or less contorted  
and its curvature to be somewhat unnatural, and thereby  
creates the disease under consideration. From what  
has already been said of the occasional and predis-  
- - - - - poserent causes, it will be no difficult matter to pre-  
- - - - - cise how they act in bringing about the same  
effect, one set accidentally and the other naturally  
exerting immediate action in the lungs. They all  
appear evidently to operate by inducing plethora in-  
- - - - - increasing a greater determination of blood to the  
lungs. This increased flow of blood acting with



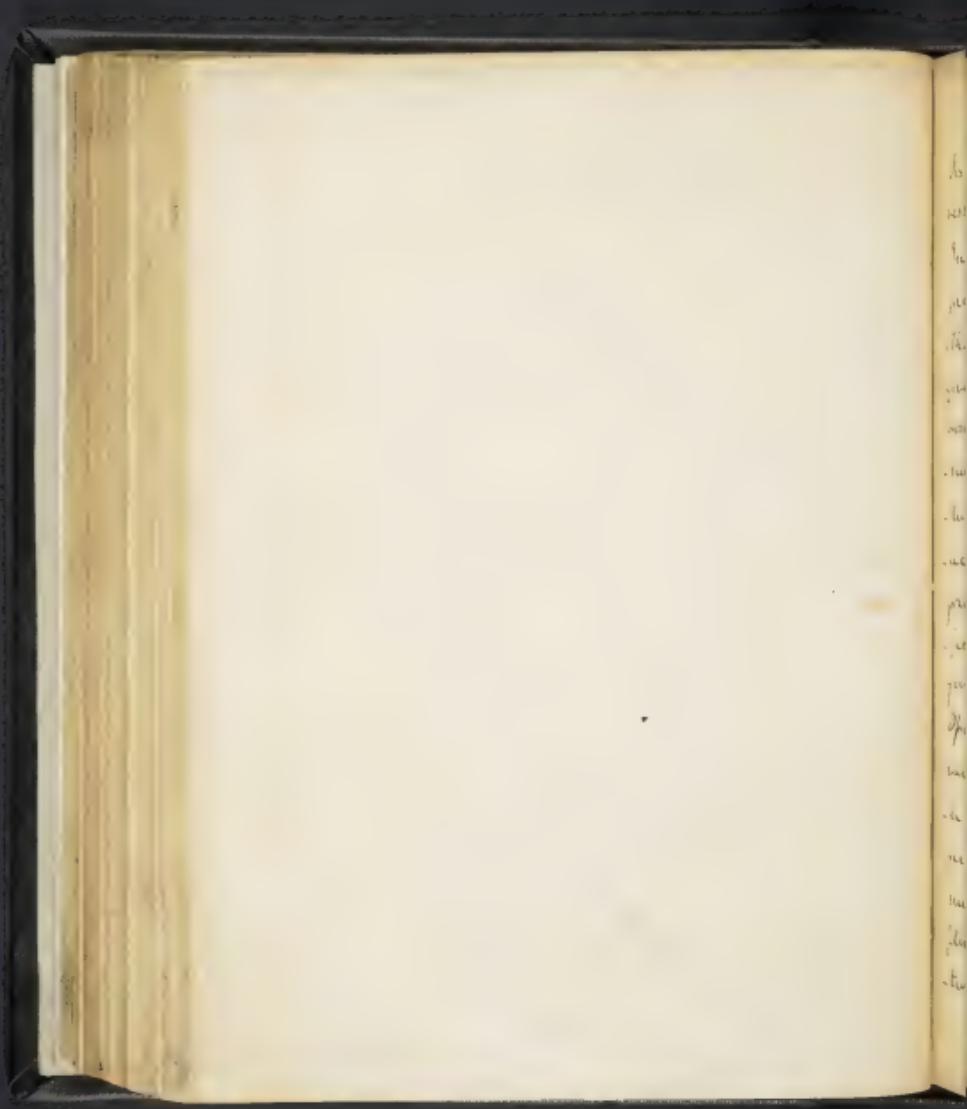
greater force than usual against the internal surface of the vessels, causes them sometimes to rupture, in order to relieve themselves of this unnatural accumulation. This is the manner in which Haemoplysis is said occasionally to occur, but it is seldom if ever the case and is by no means to be considered a common occurrence. The most usual manner however in which it takes place, is by the increased impetus of blood through the lungs creating more or less irritation or inflammation in the vessels. This creates in the inhalant a morbid or an increased degree of action which causes the blood to flow along with the serum into the bronchial canities. The excitability therefore of the blood vessels causes then mouths or excretory offices to become so abnormally enlarged, that the blood may flow through them unimpeded. This appears to be the most rational theory that can be given of pulmonary haemorrhage, especially when we come to survey the structure of the lungs, the delicacy of its texture, the numerous ramifications of blood vessels, and the swiftness with which they commence to branch from

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larger vessels. Indeed it appears a matter of surprise that it does not occur oftener than it really does. From the organization of the lungs then, that indicates their liability to plethora and their incapacity to resistance without some injury of structure, we at once perceive why the occasional and pre-slipperon causes should bring on such a phenomenon. The only manner then by which this organ can relieve itself is, as has been mentioned, by the rupture of some of its vessels or the blood preternaturally exciting the intervals causes their palmar arteries to be so enlarged, that it passes out in its pure and unaltered state. The objection made to the plethoric doctrine laid down above is, that plethora does not exist in every instance, but on the contrary we frequently meet with haemorrhage in persons of a delicate habit of body and languid circulation, & therefore this doctrine will not hold? It may be answered by way of reputation, that the strength and resistance of the blood vessels is in proportion to the delicacy and lankness of other parts. Moreover what

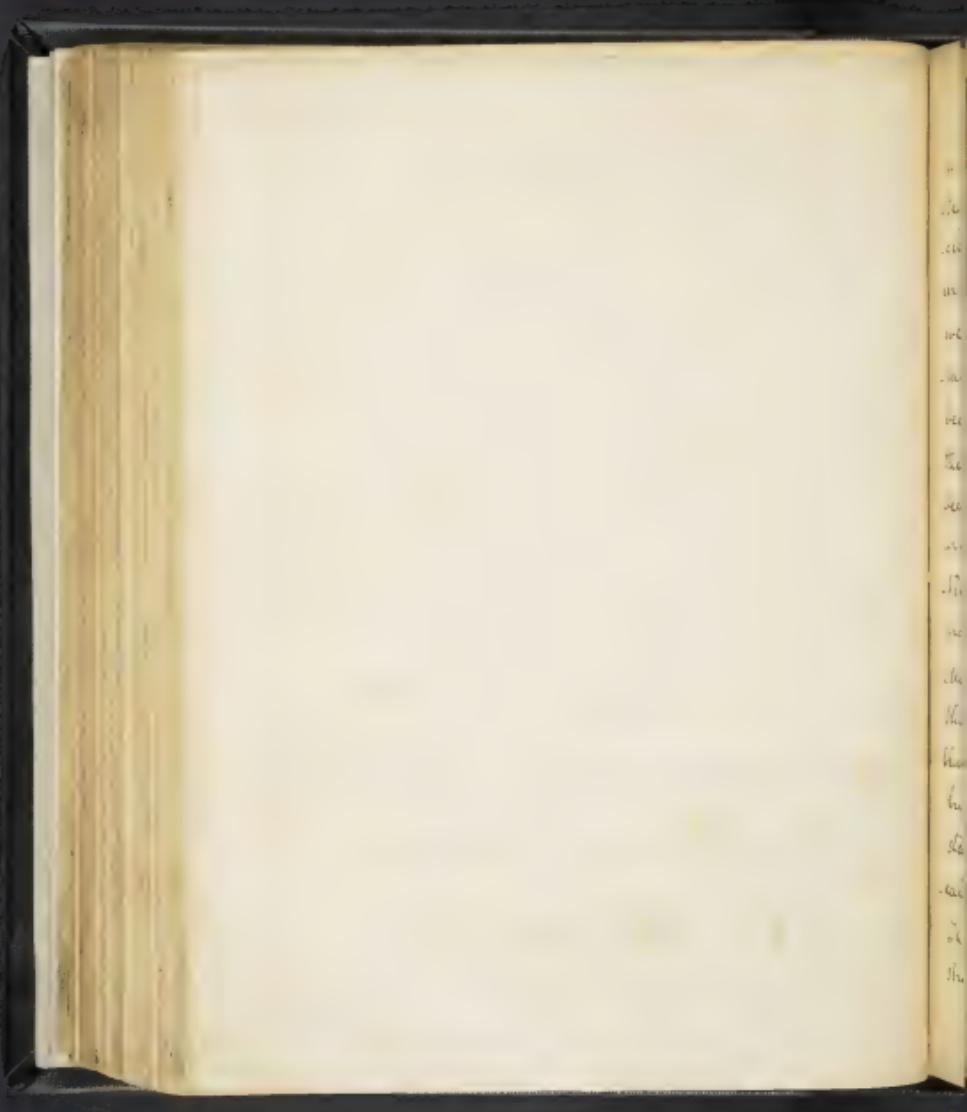


would be considered a full state of the vessels in one person  
would not be in another. Having exposed the fallacy  
of such an objection, it will now be sufficiently easy  
to comprehend the nature of this complaint and the  
principles on which its treatment is founded. If the  
pulse be full, quick, and hard, as is frequently the  
case previous to an effusion in active haemorrhage,  
bleeding should be resorted to, and to have as full of  
puff; a large quantity should be drawn at one time. This  
remedy has sometimes been supplanted by the use of digitalis  
but the lancet shrub always have the preference when the  
above mentioned condition of the system prevails, for  
that increase of action in the blood vessels which causes  
their rupture or an effusion of blood is only to be remo-  
ved by this process. After bleeding has been performed  
to a considerable extent, the pulse sometimes becomes soft  
and many indications of the inflammatory deatheresis disap-  
pear yet the haemorrhage is repeated. In cases of this  
kind digitalis seems very applicable and acts by dimin-  
ishing the force and velocity of the circulation.



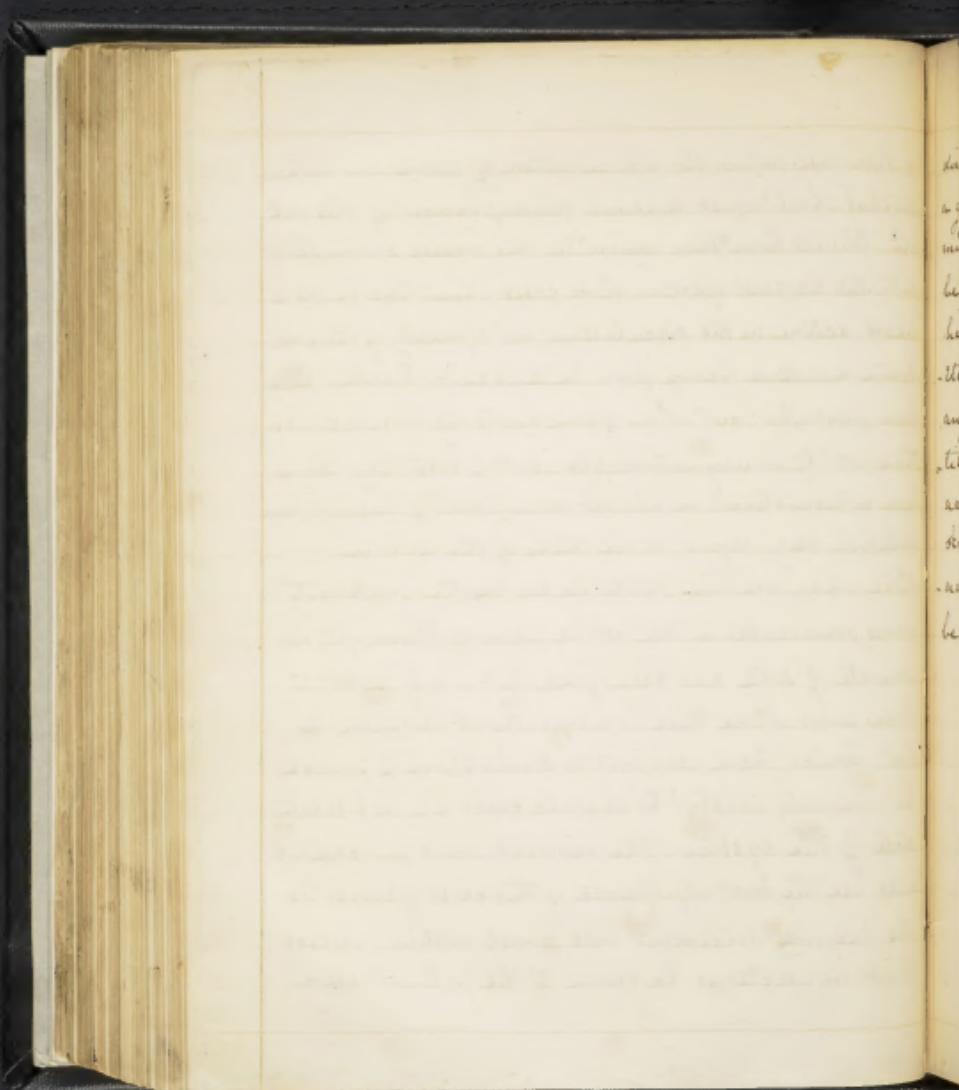
Its effect should be kept up sufficiently long to allow the vessels to acquire their tone and capacity to resistance. In consequence however of the digitalis being very precarious in its operation, it should give place to other remedies. It sometimes does not act promptly when given in small doses, and when increased endangers vomiting. In habitual cases of Haemoptysis accompanied with slight cough and great irritability of constitution, it is well calculated to render service. The sulphate of lead is a less precarious remedy and more prompt in its operation, but nevertheless should be subject to the same restriction, as digitalis viz never to be given until fibrile or violent action is reduced.

Opium has almost been indiscriminately employed in the various kinds of haemorrhage, but in Haemoptysis great attention has been paid to the state of the system previous to its administration. It appears to be better suited to the passive forms of haemorrhage or that flow of the blood connected with an enfeebled circulation. Hyoscyamus has occasionally been prescribed



in those cases where the administration of opium was indica-  
-te, but should never supersede the employment of this article. Blisters have been applied in this disease and no doubt  
with the happiest effect, in those cases where there exists a  
weak action in the circulation and especially if there re-  
main a dull or heavy pain in the chest. Emetics have  
been prescribed and when given under the limitations,  
their utility is unquestionable, but of late they have  
been administered in almost every form of haemorrhage  
without any regard to the state of the system.

Nitre when combined with Tartar Emetic frequently  
proves serviceable in the active form of Haemoptysis.  
Muriate of soda has been given, but is only suited to  
those cases where there is a very slight discharge of  
blood. Tonics have received no small share of praise  
but are only adapted to chronic cases or a debilitated  
state of the system. The mineral acids and chalyb-  
-ates are the most appropriate of this class of remedies.  
The foregoing treatment will avail nothing, unless  
that injunctions be given to the patient accor-



ding, as the exigencies of the case may demand. In  
a general way, all exertions of body, exertment of the  
mind, together with other occasional causes should  
be avoided. He should be confined to bed with his  
head and shoulders elevated and should be prohib-  
ited even from talking if the haemorrhage be  
any way profuse. His chamber should be well ven-  
tilated, his feet should be low, his drinks cool and  
acidulated. Finally if the disease be connected with  
scrofula, or a strong disposition to phthisis pulmo-  
naris exists, a strict prophylactic plan should  
be adopted.

